



Weldon Spring Site Quarry



FACT SHEET

This fact sheet provides information developed by the former WSSRAP Community Relations Department to provide comprehensive descriptions of key activities that took place throughout the cleanup process at Weldon Spring, Missouri. This site is managed by the U.S. Department of Energy Office of Legacy Management.

From 1942 to 1969, contaminated debris from various U.S. Department of Defense and U.S. Atomic Energy Commission operations was dumped into the Weldon Spring Quarry, located 4 miles south of the Weldon Spring Chemical Plant on Highway 94 South. Over time, the groundwater under the Quarry became contaminated.

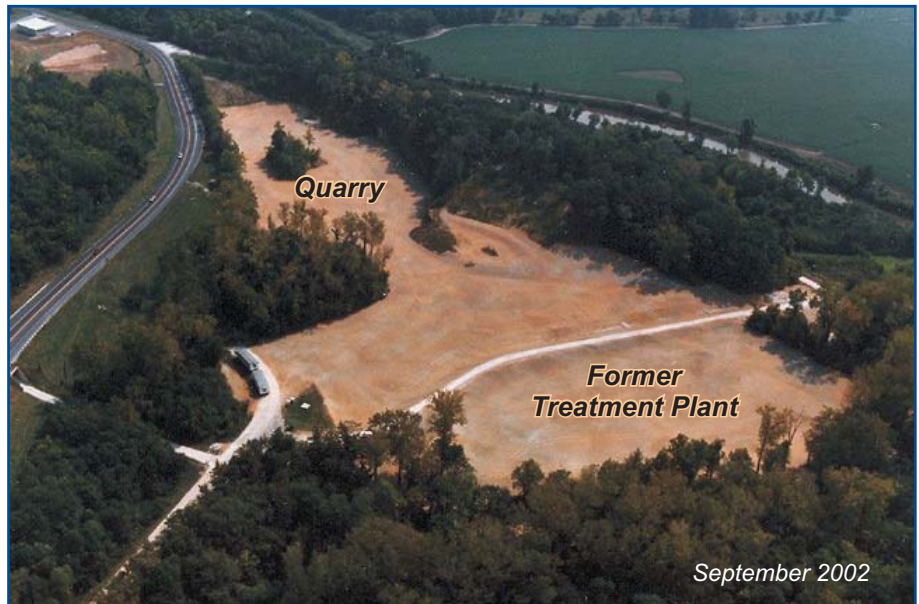
The 9-acre Quarry site is located near the St. Charles County well field. Responding to the possibility that contamination in the groundwater could impact the drinking water wells, the U.S. Department of Energy (DOE) was challenged with addressing this problem. Monitoring conducted by the county, state, and DOE provided assurance to users that the water is safe.

The Quarry cleanup was accomplished under oversight of the U.S. Environmental Protection Agency (EPA) and the State of Missouri. In May 1989, DOE obtained a National Pollutant Discharge Elimination System (NPDES) permit issued by the Missouri Department of Natural Resources (MDNR) to treat and release the impounded water at the Quarry. EPA and DOE signed a Record of Decision (ROD) approving the removal of bulk waste from the Quarry, effective March 1991.

De-watering the Quarry was the first step. The quarry water treatment plant treated contaminated water from inside the Quarry from November 1992 to December 2000. More than 70 million gallons of water were treated and successfully released while achieving all permit requirements.

The next step was to remove the bulk waste. This waste was excavated and transported to the Chemical Plant site over a dedicated haul road and placed in an engineered temporary storage area.

Removal of the bulk waste from the Quarry eliminated the potential health and environmental risks to the groundwater associated with these materials and the contaminant source. This milestone marked a significant step toward meeting one of the goals of the project—



to eliminate potential hazards to the public and environment.

No trucks were allowed to leave the Quarry or storage area without first being thoroughly cleaned and inspected to ensure contamination-free transportation. As a result, no contaminants were lost en route along the haul road from the Quarry to the Chemical Plant.

Approximately 12,000 round trips totaling 96,000 miles were made without incident. This accomplishment can be attributed to a stringent and effective safety program. Also, the 4-mile haul road was dedicated solely to bulk waste hauling, thus eliminating other traffic.

In December 1995, the final load of bulk waste was removed from the Quarry, marking a major milestone in the cleanup of the Weldon Spring Site. Nearly 120,000 cubic yards of contaminated soil, metal, and building rubble had been hauled from the Quarry pit to the storage area of the Chemical Plant site.

From the storage area, the first load was moved to the on-site disposal cell on March 5, 1998. Placement of all Quarry bulk waste in the disposal cell was completed on December 4, 1998.

In September 1998, a second ROD was approved. This ROD addressed residual contamination in the groundwater under and immediately south of the Quarry. The decision provided for long-term monitoring to ensure that conditions at the Quarry and the well field will remain protective of human health and the environment. The ROD also called for institutional controls to prevent uses inconsistent with recreational use and uses that would increase contaminant migration.

The decision also outlines the performance of field studies to support the selected action of long-term monitoring. These field studies consisted of installing a groundwater collection system (interceptor trench) and operating it for up to 2 years.

Quarry restoration was completed in several phases. Work activities included backfilling the Quarry with specially selected and prepared borrow material, dismantling the quarry water treatment plant, reclamation of the water collection system, restoring the haul road, and final grading. Backfilling reduced the physical hazards associated with excavated areas, such as rock benches, open fractures, ponded water, and potential instability in the high wall. The backfill also provides a gentle slope so rainwater flows over the surface to the Little Femme Osage Creek.

The conversion of the haul road to a hike-and-bike trail and final grading of the Quarry was the last phase of restoration. The final grade minimizes erosion, and the area was returned to its natural contours. Restoration of the Quarry was completed in September 2002.